



South Ellwood Field Project

Lease Line Adjustment

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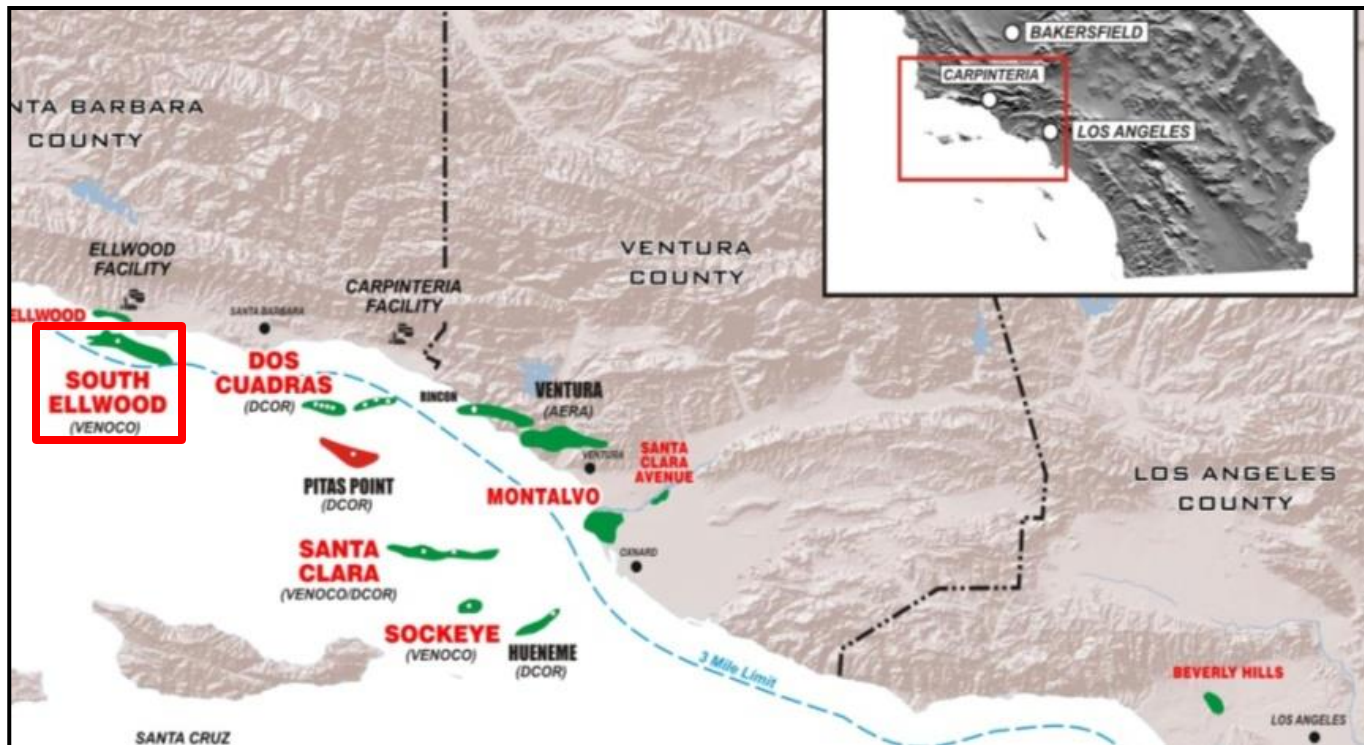
Scoping Hearing – Goleta

June 24, 2015

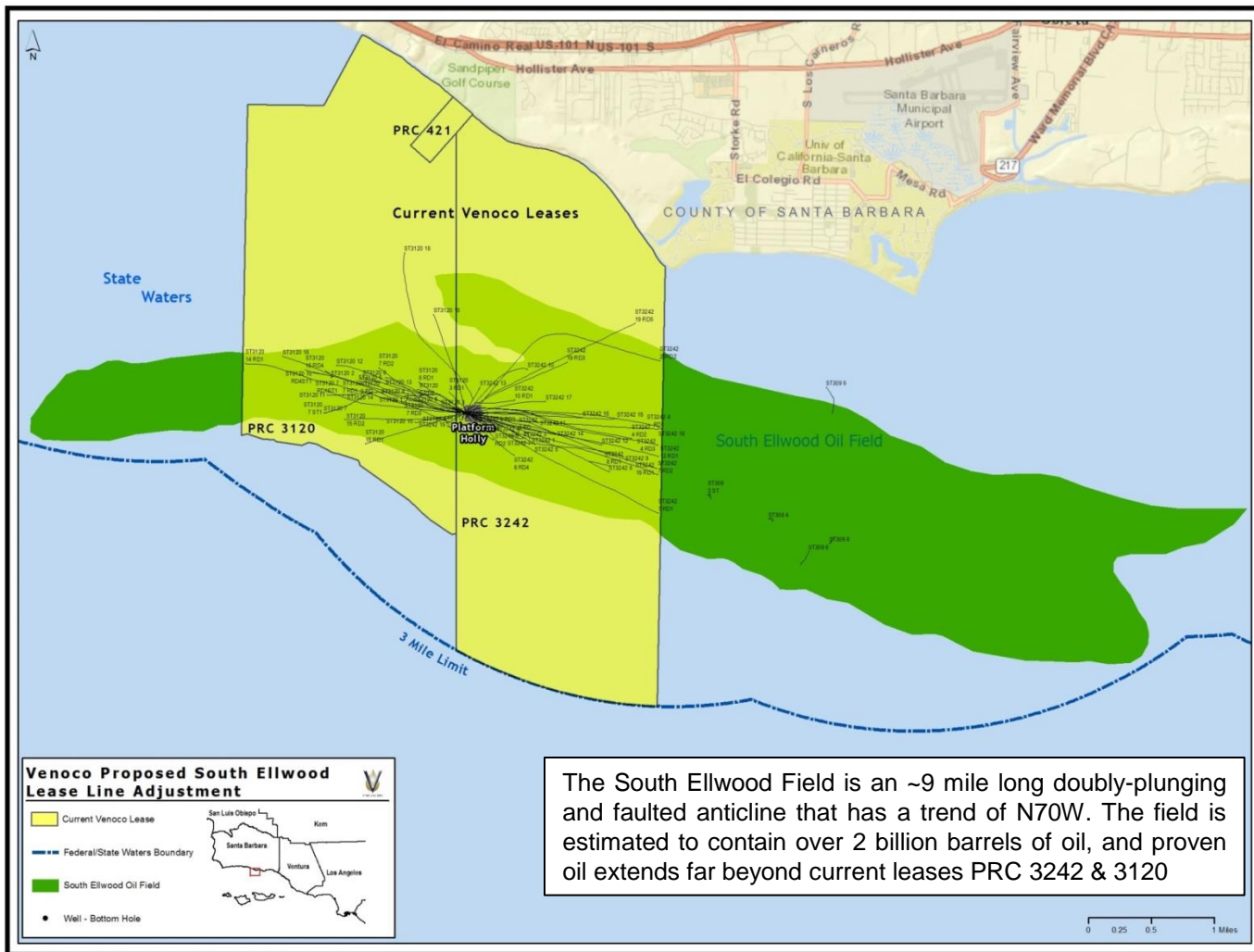


South Ellwood Field – Platform Holly

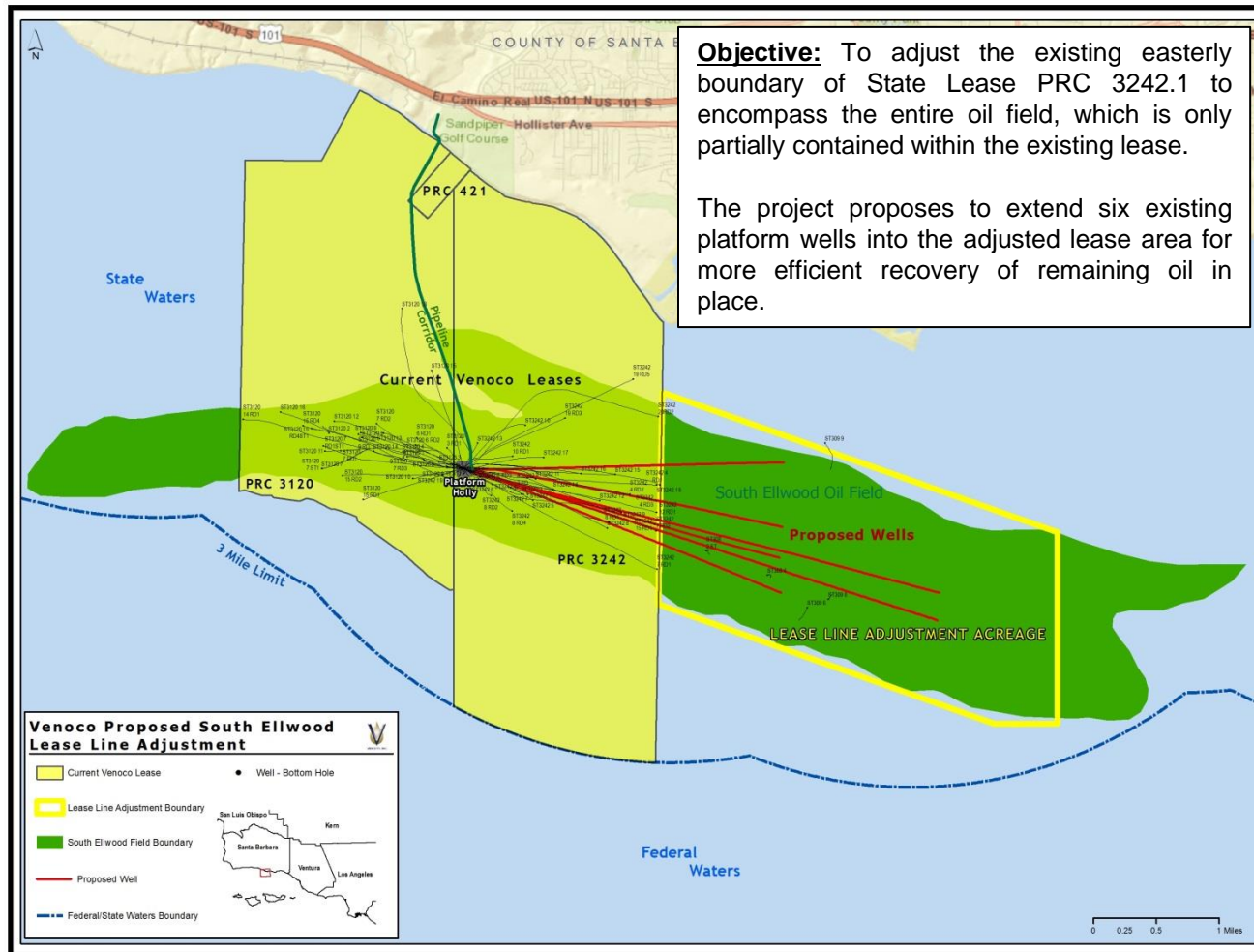
The South Ellwood Field is located ~2 miles offshore along the northern margin of the Santa Barbara Channel. Drilling, production and some processing occur on Platform Holly, which is set ~11 miles west of the city of Santa Barbara. Oil/gas are further processed at and sold from the Ellwood Onshore Facility (EOF).



South Ellwood Field Project



South Ellwood Field Project - Objective



Existing wells and infrastructure:

Existing wells will be re-entered and extended to new bottom-hole locations. Extension wells will re-use existing steel casing that is set beneath the sea floor.

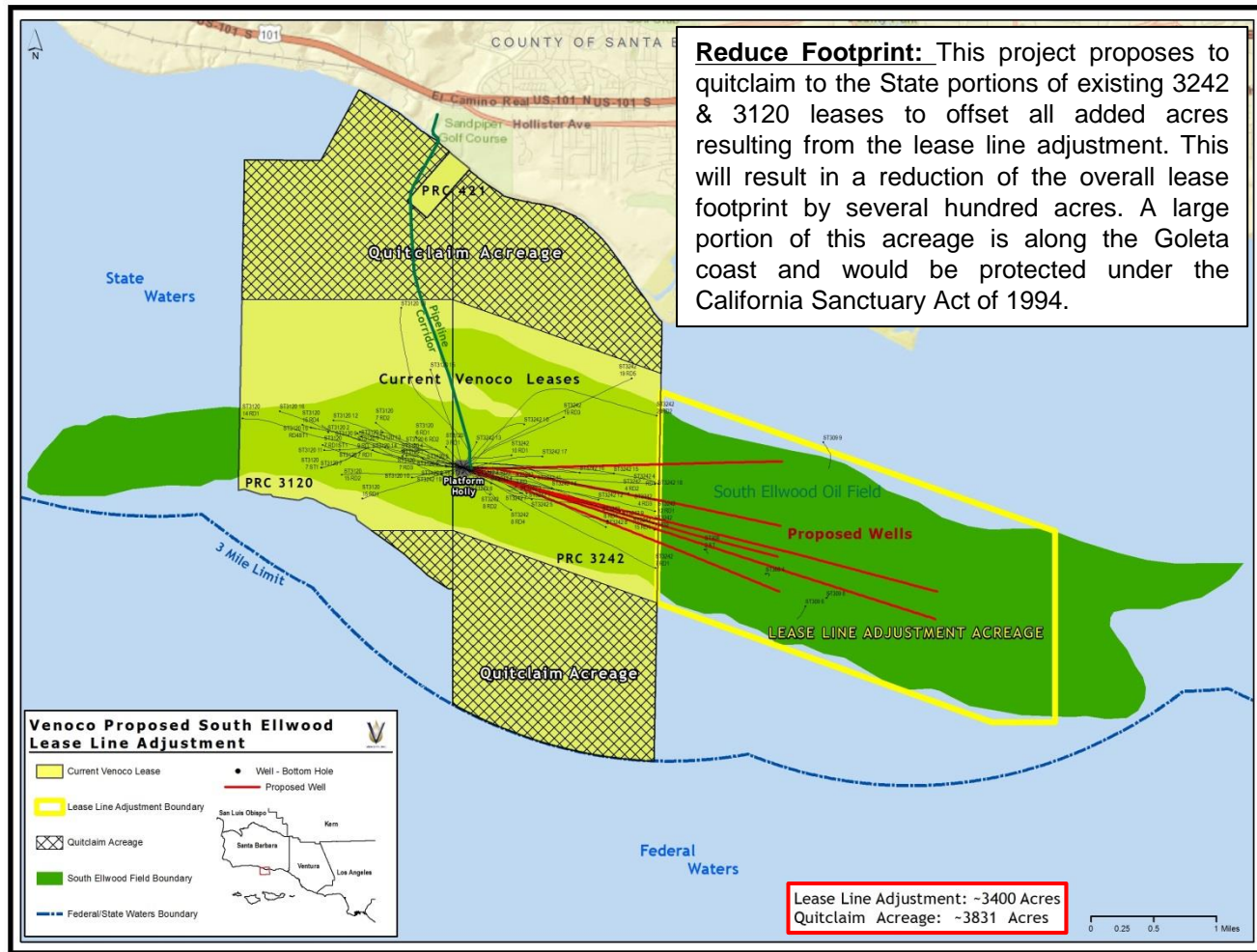
Production will occur at depths greater than 3000 feet. No impact to the marine environment.

The diagram illustrates the Platform Holly infrastructure and well layout. Key features include:

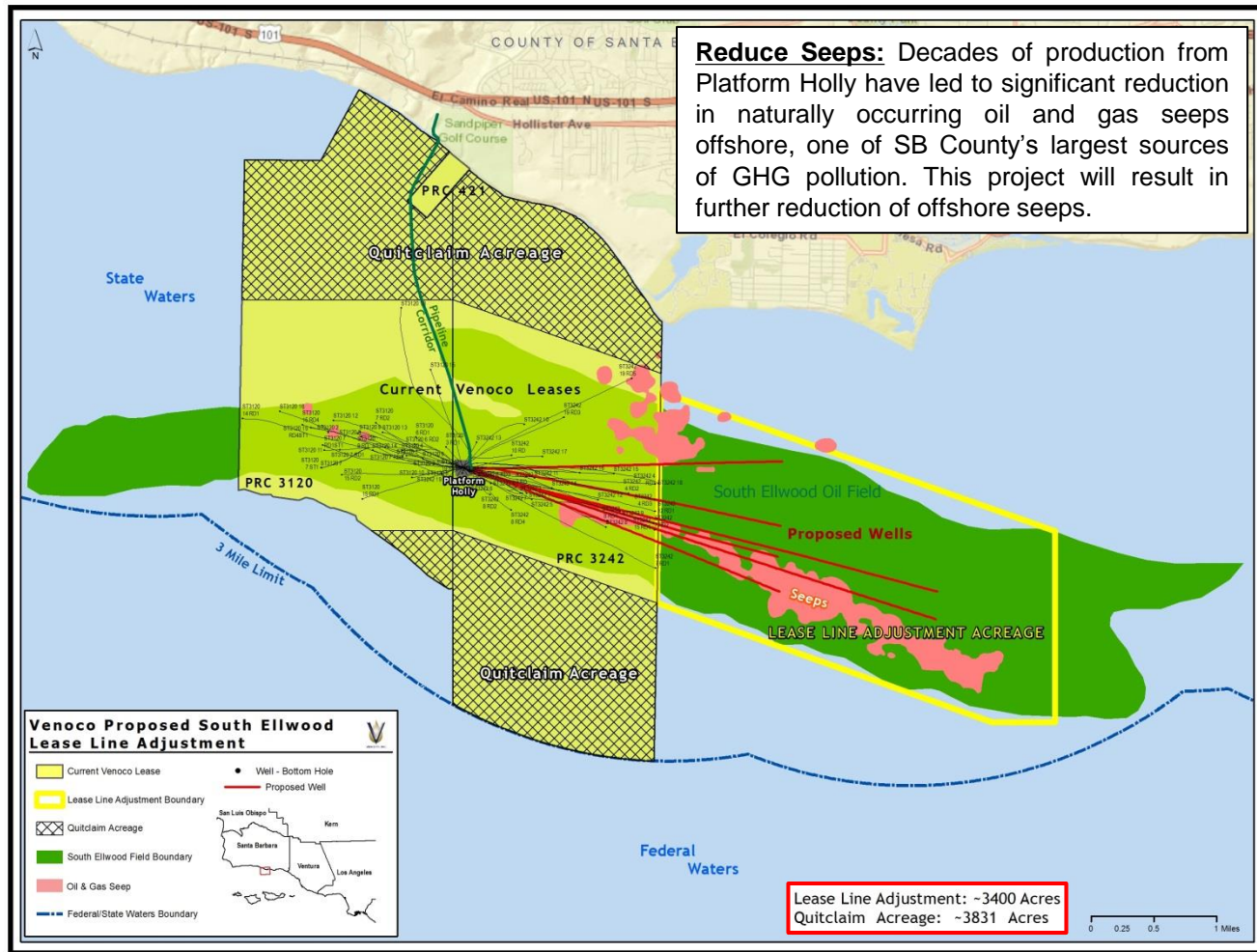
- Platform Holly:** Located on the seabed, with a "Seep Tent" nearby.
- EO F:** End of Flow line indicator.
- Current 3242 Lease Line:** A blue vertical line separating the current lease area from the proposed adjustment.
- Proposed Lease Line Adjustment:** A yellow vertical line on the right side of the diagram.
- Existing Wells (30):** Multiple black lines representing current well paths extending from the platform into the seabed.
- Proposed Wells (6):** Red lines representing new well paths extending from the platform into the seabed.
- Monterey Formation:** A brown shaded area representing a geological layer.
- Depth Scale:** Vertical axis on the left and right ranging from 0 ft to 5,000 ft.
- Horizontal Scale:** Bottom axis ranging from 9,000 ft to 25,000 ft.
- Inset Diagram:** A detailed view of the casing re-entry process, showing the "Re-enter existing Casing" and "Cased re-drill" paths.



South Ellwood Field Project – Reduced Footprint



South Ellwood Field Project – Reduced Seeps

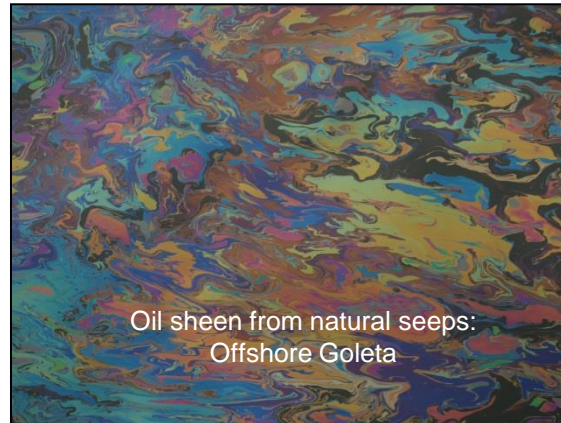


Offshore Oil Production Reduces Seeps

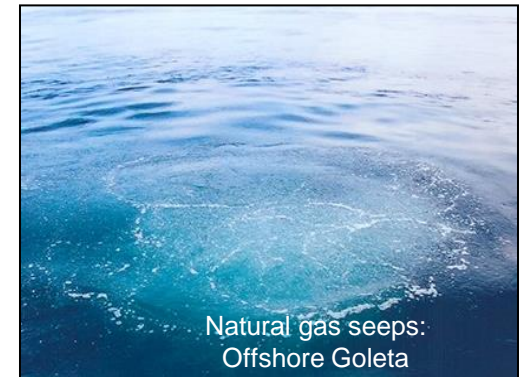
- The Santa Barbara Channel has some of the most prolific oil and gas seeps in the world. Second only to Caspian Sea. There have been more than 1,200 natural seeps charted in the Santa Barbara Channel. Half of them occur within 3 miles of Platform Holly
- According to NOAA, the natural seeps around South Ellwood leak and estimated 4,200 – 25,000 gallons of crude oil into the ocean every single day. This results in impacted wildlife (>1000 oiled birds per year) and significant impact to local beaches and sensitive shoreline habitat
- The seeps also account for an estimated ~ 6 million cubic feet of gas/day. This is the second largest source of greenhouse gas emissions in Santa Barbara County, emitting more GHGs than any man-made source. They emit ~2000 tons CO₂e/day or 700,000 tons CO₂e/year
- Natural seeps also result in ~24 tons/day of reactive organic compounds (SBCAPCD). ROC's are a precursor to ozone/smog and harmful to health
- Data and research confirm significant reduction in oil and gas seepage due to oil extraction at Platform Holly (80% reduction within 1 mile of Platform Holly), resulting in significantly improved local air quality and less tar on local beaches
- Venoco's South Ellwood Project will reduce natural seeps in one of the most active seep areas in the SB Channel
- Recent research (Boles 2015) estimates that seeps could be further reduced by ~3 MMCF/day. This is equivalent to over 500,000 tons of CO₂e/year or 35 % of the total manmade GHG emissions in unincorporated SB County
- This reduction would be equivalent to removing ~100,000 passenger vehicles daily from local roads



<http://www.socalifornia.org/>



Oil sheen from natural seeps:
Offshore Goleta



Natural gas seeps:
Offshore Goleta

<http://www.socalifornia.org/>



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Project - Key Components

➤ **No new wells proposed**

Existing wells will be re-entered and extended to new bottom-hole locations. Extension wells will re-use existing steel casing that is set beneath the sea floor.

➤ **No fracking**

No hydraulic fracturing of any kind will be used on this project (the reservoir rocks are already naturally fractured).

➤ **The onshore facility (EOF) will NOT be expanded**

The project has been designed to maintain production levels within the current operating capacity of both Platform Holly and the Ellwood Onshore Facility (EOF). No major modifications are required and production will stay within current permit limits.

➤ **The project does NOT extend the life of the EOF or Platform Holly**

Development of known reserves in the adjusted lease area will not extend the life of Platform Holly or the EOF. The project was designed to stay within the current economic life of the EOF.

➤ **Platform Holly and EOF will continue to operate regardless of a lease line adjustment**

Venoco's lease allows for drilling and production indefinitely. Adjusting the lease line will allow for more efficient drainage of existing oil

➤ **Existing regulations allow for this adjustment under certain findings**

The Public Resource Code allows the State Lands Commission to adjust existing lease boundaries of an oil field partially contained within the lease.



Thank You!



Venoco is a privately owned oil and gas company founded in Santa Barbara County in 1992. We have an exemplary 20 plus year track record of operational excellence in California. We are a significant contributor to local non-profits, donating staff volunteer time and over \$5 million to more than 100 different local organizations.

Venoco is led by experienced management and operations staff. We are proud of our reputation in the communities where we operate; both for having a solid record of meeting high safety and environmental standards, and for being a good corporate citizen.



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